

REMARKS

Claims 1, 3, 8-15, 43, and 46-51 currently appear in this application. The Advisory Action of January 12, 2005, has been carefully studied. These claims define novel and unobvious subject matter under Sections 102 and 103 of 35 U.S.C., and therefore should be allowed. Applicants respectfully request favorable reconsideration, entry of the present amendment, and formal allowance of the claims.

It should be noted that claim 1 defines physicochemical properties, including the isoelectric point of "alpha-isomaltosylglucosaccharide-forming enzyme" obtainable from the microorganisms of the genus *Bacillus*. The specification as filed discloses isoelectric points of  $5.2 \pm 0.5$ ;  $5.2 \pm 0.5$ ; and  $7.3 \pm 0.5$  in Experiment 5-1 on page 69, Experiment 8-1 on page 81 and experiment 12-1 on page 97 of the specification as filed. It is respectfully submitted that there is clear support in the specification for the recitation in claim 1 of about  $5.2 \pm 0.5$ ; or  $7.3 \pm 0.5$ .

In deference to the Examiner's opinion, the optimum temperature in claim 1 has been amended to recite that the optimum temperatures are (i) 40, 45 or 50 C when at a pH of 6.0 for 60 minutes and (ii) 45, 50 or 55 C when incubated at a pH of 6.0 for 60 minutes in the presence of 1 mM  $\text{Ca}^{2+}$ . Support for these amendments can be found in the specification as filed at page 69, Experiment 5-1; page 81, Experiment 8-1; and page 97, Experiment 12-1.

Support for the optimum temperatures recited in claim 48 can be found in the specification as filed at page 32, lines 6-10, which reads as follows:

Having an optimum temperature of 60 C when incubated at a pH of 8.4 for 60 minutes; or

Having an optimum temperature of 65 C when incubated at a pH of 8.4 for 60 minutes in the presence of 1 mM  $\text{Ca}^{2+}$ .

It should be noted that claim 47 defines "alpha-isomaltosylglucosaccharide-forming enzyme" obtainable from the microorganisms of genus *Arthrobacter*. On the other hand, Experiment 16-1 at page 112 disclosed the physicochemical properties of the enzyme derived from *Arthrobacter globiformis* A19 (Strain A19) and clearly recites that the optimum pH of the enzyme is 8.4. It is well known to one skilled in the art that the optimum temperature of an enzyme is measured at the optimum pH of the enzyme. It is therefore believed that the optimum temperature measured at a pH 8.4, which is an optimum pH of the enzyme derived from *Arthrobacter globiformis* A19 (Strain A19), and clearly recites that the optimum pH of the enzyme is 8.4. It is well known to those skilled in the art that optimum temperature of an enzyme is measured at an optimum pH of the enzyme. It is therefore believed that the optimum temperature measured at a pH of 8.4, which is an optimum pH of the enzyme derived from *Arthrobacter globiformis* A19 (Strain A19), is an optimum temperature of alpha-isomaltosylglucosaccharide-forming enzyme obtainable from the microorganisms of the genus *Arthrobacter*. It is believed that this is sufficient support for the optimum temperature in claim 48.

The phrase "and having an amino" in claim 1 is an error. The present amendment deletes this phrase from claim 1.

"The activity for alpha-isomaltosyl-transferring enzyme was examined" at page 82 in connection with Table 7 is a typographical error. The correct recitation is "The activity of alpha-isomaltosylglucosaccharide-forming enzyme." It is clear from the specification as filed that this was a typographical error because the title of Experiment 8-1 recited at page 81, lines 4-5, is "Property of alpha-isomaltosylglucosaccharide-forming enzyme." It is unreasonable that the activity for alpha-isomaltosyl-transferring enzyme was the subject of Experiment 8-1, which is an experiment to examine "Property of alpha-isomaltosylglucosaccharide-forming enzyme."

Similarly, it is clear that "the activity of alpha-isomaltosyl-transferring enzyme was examined" at page 113, lines 20-23 (in connection with Table 19) is a typographical error which should have read "the activity of alpha-isomaltosylglucosaccharide-forming enzyme was examined," because the title of Experiment 16-1, recited at page 112, lines 8-9, is "Property of alpha-isomaltosylglucosaccharide-forming enzyme."

It is Experiment 8-2 and Experiment 16-2 in which the activity of alpha-isomaltosyl-transferring enzyme was examined.

The molecular weight in claim 1 has been amended to recite three molecular weights, namely,  $140,000 \pm 20,000$ ,  $137,000 \pm 20,000$ , or  $136,000 \pm 20,000$ . It appears that the Examiner has read the  $\pm$  as being "+" underlined. However, the relationship "plus or minus" is conventionally represented as " $\pm$ ."

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Reply to Advisory Action of January 25, 2005

The term "solution" has been deleted from claim 1,  
as this appears to have been an inadvertent typographical  
error.

In view of the above, it is respectfully submitted  
that the claims are now in condition for allowance, and  
favorable action thereon is earnestly solicited.

Respectfully submitted,

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